CHIMNEYS,—BARRINGTON COURT.

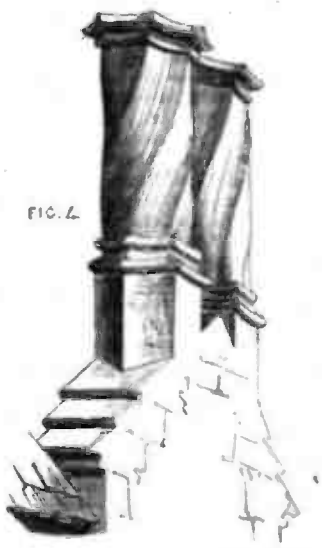


FIG. 4.

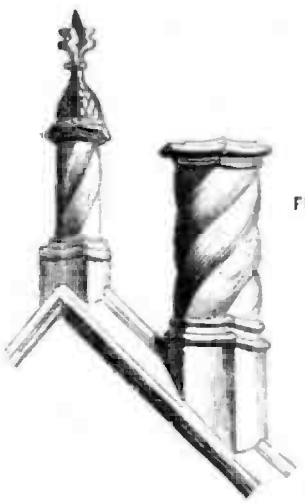


FIG. 5.

LESLIE'S PATENT FOR HEATING AND VENTILATING.

A PATENT has been recently granted to Mr. Leslie, of Conduit-street, for improvements in arranging stoves and other apparatus for heating and ventilating. The following is the patentee's own description of the engravings:—

Fig. 1 shews the section of a stove and apparatus for heating a boiler and an oven, and also for ventilating a kitchen or room, in which such apparatus may be employed.

Fig. 2 is a front view thereof; *a a* is the fire-place or stove, there being no fire-bars at the bottom, the front being composed of wire-bars of small diameter, and the fire-place is very shallow from front to back, the back consisting of fire-brick or tile, *b*, constituting one side of the oven, which I prefer to be of fire-brick or tile, but it may be of cast-iron, or other suitable material; *e* is the oven, there being a flue of the same width as the fire passing over and under it, so that the draft into the chimney takes the course indicated by the arrows; *d* is a boiler, the shape of which is clearly shewn, and it offers a very extensive surface to be heated by the passage of heat through the flue, *e e*, from the fire to the chimney. The upper surface of the boiler is suitable for a hot plate, and there may be openings with suitable pipes, or apparatus, to have steaming apparatus applied thereto. Proper means of supplying the boiler constantly with water are to be applied, and a cock or cocks for drawing off hot water. Just above the back of the boiler I apply a damper in the chimney, so as to be able to cut off or regulate the draft. The oven door may be of cast-iron, but I prefer it to be of fire tile or brick, placed on one side of the oven, the other side being closed; by this arrangement a very small consumption of fuel will take place, and yet a very large frontage of fire surface will be obtained for roasting or other purposes, and at the same time the oven will be in a constantly heated state suitable for baking, and a large quantity of water will be kept heated to a degree to give off steam. In order to ventilate the kitchen or room in which such apparatus is set, I cause a long opening, *f f*, to be made into the chimney, rising from the upper surface of the boiler to the cornice or ceiling, which opening may be from two to four inches wide; and it will be found that by such means there will be a constant passage of the air from the kitchen or room through such long opening, by which any impure air will be carried off; and in order that the outgoing air may not be greater than the case requires for the time being, I have iron covers, shutters, or slides, which may be caused to cover such opening to a greater or less extent, and such covers may be a series of doors, slides, or shutters, one above the other, hinged to the side of the opening, *f*, or they may be metal plates moving on axes, in the character of *louvre* boards, so arranged that any of them may be closed, or more or less open. And it will be found by this arrangement of apparatus there will be no tendency for the smoke or vapours passing up the chimney from the fire to pass into the kitchen or room, but there will be a constant draft from the kitchen or room up the chimney, which will not only carry away the products from the fire up the chimney, but also the air from the room or kitchen, thus producing any desired degree of ventilation, as well as an advantageous consumption of fuel. In constructing stoves and apparatus for heating drawing and other rooms, the same principle of arrangement, so far as the shallow fire and opening into the chimney is observed, but there being no oven or boiler there will be no tortuous descending flue as above shewn and described.

Fig. 3 shews a front view, and fig. 4 a vertical transverse section of a stove and apparatus, suitable for heating and ventilating rooms; *a a* is the fire-place, which I prefer to have as near as may be to the floor, and that the sides and back should be of fire-brick; the chimney, *g*, has an opening, *f f*, of two or more inches wide in the chimney, with means for closing or partially closing of the same, so as to regulate the quantity of air carried off by the draft up the chimney. The opening, *f*, rises to the cornice as is shewn.

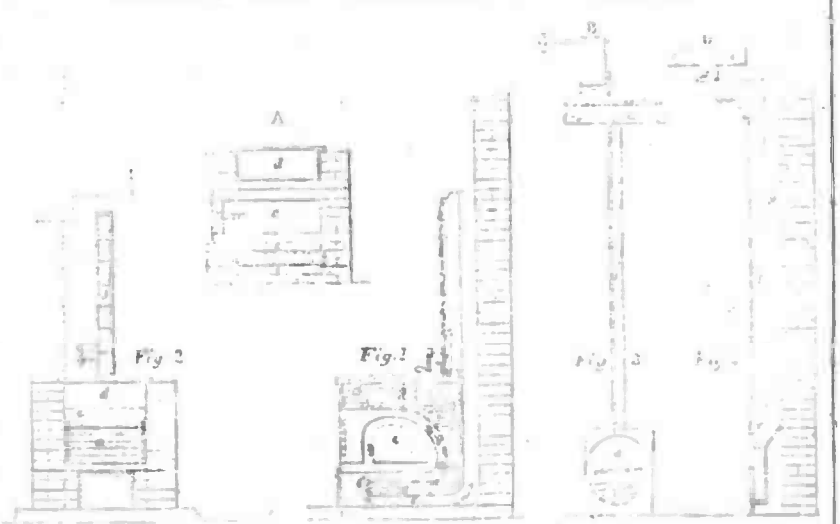
I would remark, that I have in the drawing shewn the apparatus in the plainest and most simple form, but architectural ornaments may be resorted to, both in respect to the chimney and to the opening, for the fire-place as well as for the opening into the chimney, according to the taste of the person directing the construction of apparatus according to my invention. I would remark, that the arrangement of stove and apparatus just described will be found to offer great advantage in consuming fuel economically, giving off the largest quantity of heat to the apartment where it may be applied, and at the same time producing a very healthful ventilation by carrying off the impure air of the room through the long opening, *f*, into the chimney. In figs. 1 and 2, the long opening, *f*, is more or less closed by means of a series of flaps with horizontal axes, which may be more or less opened; and in figs. 3 and 4, the long opening is covered by vertical flaps as shewn. JOHN LESLIE.

A stove in Mr. Leslie's kitchen, formed in the manner described, gives an excellent roasting fire, a large boiler, steam for cooking, a hot plate, and an oven that bakes all the bread used in the house, for 7*d.* a day. As a ventilator, its effect is necessarily very powerful.

JOTTINGS ABOUT RAILWAYS.

THE novel means of traversing the metropolis by underground railways has been suggested to her Majesty's government by a Mr. John Williams. He proposes to make a sort of system of tunnels under and through every main street of the metropolis; in which not only are two lines of railways to be laid down, but the various water, gas, and drainage pipes are to be deposited — a matter alone which he has long urged in preference to the existing practice of laying the water pipes, &c., in the earth, inaccessible except by breaking up the streets and pavements. The subways he suggests for the water, gas, and drainage pipes, are to be made available for a system of underground metropolitan railways.——The conduct of nobles is sometimes ignoble, and provokes contrasts. We lately noticed the threat of the Duke of Cleveland to treat all railway surveyors as trespassers; last week the Lord President of the Council, Lord Wharncliff, celebrated the commencement of the Huddersfield and Sheffield Railway by himself cutting the first sod of earth; and the Marquis of Downshire has subscribed 1,000*l.* towards the preliminary expenses of the Great County Down Railway.——The Grand Junction have very judiciously determined that a compartment of a first-class carriage shall in future be reserved for ladies travelling alone. The example will doubtlessly be followed by other companies.——It is rumoured that the Central Terminus Company have bought Hungerford Bridge for 230,000*l.*, being 100,000*l.* more than it cost, and are in treaty for the purchase of

HEATING AND VENTILATING APPARATUS.



A. Cross section of parts
B. Separate view of the lower flap, and rod connecting separate flaps together.
D. Sectional plan of Chimney.

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